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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,439	09/22/2005	Thomas J. Webster	3220-100522	3174

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EXAMINER

MAI, NGOCLAN THI

ART UNIT	PAPER NUMBER
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1793

NOTIFICATION DATE	DELIVERY MODE
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05/14/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Patent-ch@btlaw.com

Office Action Summary	Application No. 10/550,439	Applicant(s) WEBSTER ET AL.	
	Examiner NGOCLAN T. MAI	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/9/08, 9/22/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Yadav et al. (U.S. Patent No. 6,572,672).

Concerning claims 1-4 and 8- 11, Yadav discloses (column 4, lines 51-57 and column 24, lines 8-16) a method for forming biomedical orthopedic device comprising providing a biomedical material formed of a non-stoichiometric titanium based alloy, Ti-Ta-Nb-Zr, and compressing the powder metal. The biomedical material is in powder form having grain size less than 500 nm (column 2, lines 55-52). Yadav teaches (column 24, lines 17-19) the non-stoichiometric medical material nanoscale powders use non-toxic elements in orthopedic and other medical implant which is the same as having cytocompatibility within interfacing biological cell. Yadav also discloses (column 24, lines 19-22) the biomedical implants are engineered to control properties such as strength, toughness, modulus, corrosion resistance, biocompatibility, porosity, surface roughness, and wear resistance.

Yadav does not specifically teach the biomedical material exhibits cytocompatibility, exhibit mechanical functionality with interfacing biological cells and exhibit osteoblast adhesion between the implant and the interfacing biological cells and has a surface roughness of less than 500 nanometer root mean square (nm rms). However the medical material taught by Yadav

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would inherently have the claimed surface roughness since the surface of the compacted device is constituted of metal particle having nanometer size and the claimed cytocompatibility, mechanical strength and osteoblast adhesion would have been inherently possessed by the medical material of cited reference because the instant claimed material are same as the cited reference. Therefore, the burden is on the applicant to prove that the product of the prior art does not necessarily or inherently possesses characteristics attributed to the claimed product. In re Spade, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990), In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977) and also see MPEP § 2112.01.

Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yadav in view of Oshida (U.S. Patent No. 6,183,255, cited by the applicants).

Yadav teach the biomaterial for use in implantable orthopedic devices substantially as claimed. Yadav however does not teach the type of materials as recited the instant claims.

Oshida discloses pure titanium and Ti-6Al-4V are known for use as biomaterial in orthopedic implantation. See column 1, lines 32-35.

Because both Yadav and Oshida teaches biomaterial for orthopedic implantation, it would have been obvious to one of skilled in the art to replace one biomaterial for the other in making an implantable orthopedic device because the substitution of one known element for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yadav in view of Davidson (U.S. Patent No. 5,415,704).

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Yadav teach the biomaterial for use in implantable orthopedic devices substantially as claimed. Yadav however does not teach the type of material as recited the instant claims.

Davidson discloses Ti-6Al-4V and Co-Cr-Mo (F75 or F799) are known for use as biomaterials in orthopedic implantation (column 1, lines 26-29). Note that Co-Cr-Mo (F75 or F799) is the alloy having the claimed composition as disclosed in the specification [00011].

Because both Yadav and Davidson biomaterial for orthopedic implantation, it would have been obvious to one of skilled in the art to replace one biomaterial for the other to in making an implantable orthopedic device because the substitution of one known element for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NGOCLAN T. MAI whose telephone number is (571)272-1246. The examiner can normally be reached on 8:30-5:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art Unit
1793

n.m.